vaccine TBC-M4, consists of a recombinant Modified Vaccine Ankara (MVA) targetting HIV-1 subtype C, the most predominant HIV subtype in India

An Indian Scientist based at ICMR's National Institute of Cholera & Enteric Diseases has collaborated with the international AIDS Vaccine Initiative (IAVI) and biotechnology firm Thereon Biologies Corporation (Cambridge, Massachusetts, USA) in the development of the AIDS vaccine candidate utilising MVA vector technology.

New AIDS treatment by German scientists

2048. SHRI K. RAMA MOHANA RAO: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether it is a fact that German scientists have developed **a** new treatment for HIV, which is useful in targeted, mutated strains of AIDS virus that they become impervious to drugs;

(b) whether it is also a fact that they succeeded in blocking the multiplication of HIV-l;

(c) if so, the details of the research; and

(d) what is the difference between the conventional therapies and the latest discovery which neutralized the human protein?

THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND FAMILY WELFARE (SHRIMATI PANABAKA LAKSHMI): (a) Yes, Sir. It is a fact that a team of German scientists from the Heinrich Pette Institute in Hamburg and Nuremberg-Eriangen University, led by llona Hauber, announced in January 2005 that they had developed a new treatment of HIV that is useful in targeted mutated strains of the AIDS virus that have become impervious to drugs. The scientific article explaining their research appeared in the "Journal of Clinical Investigations" published from the US, in January, 2005.

(b) It is claimed that they have succeeded in blocking the multiplication of HIV-1, including those strains of the virus that have developed resistance against all currently available anti-retroviral drugs.

(c) A human cellular protein called 'hypusine' is necessary for HIV replication, Hypusine synthesis is facilitated by a human cellular protein called 'deoxyhypusine synthase' (DHS). The investigators identified a substance called guanylhydrazone CNI-1493 as an efficient inhibitor of human DHS. By inhibiting DHS, this compound suppresses Hypusine formation and, thereby HIV multiplication. Further, the investigators also claimed that no measurable drug-induced adverse effects were observed. However, results of further trials are awaited.

(d) Conventional therapies, using the currently available anti-retrovira! drugs, target viral proteins called gp41, Reverse Transcriptase and Protease, which are essential for the entry of the virus into human CD4 cell and its multiplication there. The newly identified CNI-1493,on the other hand, targets a human protein called deoxyhypusine synthase (DHS), which is also essential for multiplication. Since HIV resistance is against currently used drugs that inhibit the synthesis of viral proteins only, the new drug effectively inhibits the synthesis of viral proteins only, the new drug effectively inhibits the multiplication of resistant strains also.

Embryonic stem cell therapy

2049. SHRIMATI S.G. INDIRA: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether it is a fact that many clinics in the country are conducting embryonic stem cell therapy;

(b) if so, the details thereof;

(c) whether it is also a fact that the embryonic stem cells for therapeutic use is restricted worldwide; and

(d) whether it is also a fact that ICMR is conducting an enquiry regarding the use of the above in several clinics?

THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND FAMILY WELFARE (SHRIMATI PANABAKA LAKSHMI): (a) to (d) Indian Council *of* Medical Research (ICMR) stated that those who claim clinical success following Stem cell therapy (which is still in experimental stage globally) have been asked to submit scientific details for review by Council's experts. The concerned doctor in Nutech Mediworld, New Delhi who claimed to have conducted more than 100 cases of Embryonic Stem Cell Therapy, was invited by ICMR to make a presentation, who has given